Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	0	(myf-3 or myf3) near4 (cdk4 or (cyclin adj dependent adj kinase adj "4"))	USPAT	OR	OFF	2005/09/24 17:29

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FILE 'HOME' ENTERED AT 17:30:35 ON 24 SEP 2005

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COST IN U.S. DOLLARS                                    SINCE FILE      TOTAL
                                                           ENTRY    SESSION
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L1             0 (MYF-3 OR MYF3) (8A) (CDK4 OR (CYCLIN DEPENDENT KINASE
4))
```

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Order Documents
NLM Mobile
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NLM Gateway
TOXNET
Consumer Health
Clinical Alerts
ClinicalTrials.gov
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All: 4 Review: 0

Items 1 - 4 of 4 One page.

1: Simone C, Stiegler P, Bagella L, Pucci B, Bellan C, De Falco G, De Luca A, Guanti G, Puri PL, Giordano A. Related Articles, Links

Activation of MyoD-dependent transcription by cdk9/cyclin T2.
Oncogene. 2002 Jun 13;21(26):4137-48.
PMID: 12037670 [PubMed - indexed for MEDLINE]

2: Zhang JM, Zhao X, Wei Q, Paterson BM. Related Articles, Links

Direct inhibition of G(1) cdk kinase activity by MyoD promotes myoblast cell cycle withdrawal and terminal differentiation.
EMBO J. 1999 Dec 15;18(24):6983-93.
PMID: 10601020 [PubMed - indexed for MEDLINE]

3: Zhang JM, Wei Q, Zhao X, Paterson BM. Related Articles, Links

Coupling of the cell cycle and myogenesis through the cyclin D1-dependent interaction of MyoD with cdk4.
EMBO J. 1999 Feb 15;18(4):926-33.
PMID: 10022835 [PubMed - indexed for MEDLINE]

4: Flink IL, Oana S, Maitra N, Bahl JJ, Morkin E. Related Articles, Links

Changes in E2F complexes containing retinoblastoma protein family members and increased cyclin-dependent kinase inhibitor activities during terminal differentiation of cardiomyocytes.
J Mol Cell Cardiol. 1998 Mar;30(3):563-78.
PMID: 9515032 [PubMed - indexed for MEDLINE]

Sep 14 2005 04:34:46

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=> s myoD (3A) (human or sapien)
THIS COMMAND NOT AVAILABLE IN THE CURRENT FILE
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command can only be used to look at the index in a file which has an
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commands which can be used in this file.

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                                                         ENTRY    SESSION
FULL ESTIMATED COST                                       0.21       0.21

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=> s myoD (3A) (human or sapien)
L1          130 MYOD (3A) (HUMAN OR SAPIEN)

=> s (cdk4 or (cyclin dependent kinase 4)) (4A) (bind or binding or
bound)
L2          856 (CDK4 OR (CYCLIN DEPENDENT KINASE 4)) (4A) (BIND OR
BINDING OR
                BOUND)

=> s l1 (10A) l2
L3            0 L1 (10A) L2
```

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	0	myod near4 cdk4	USPAT	OR	OFF	2005/09/24 15:54
L2	0	myod near4 (cdk4 or (cyclin adj dependent adj kinase adj "4"))	USPAT	OR	OFF	2005/09/24 15:54

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                                                           ENTRY    SESSION
FULL ESTIMATED COST                                         0.21       0.21

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=> s myod (4A) (cdk4 or (cyclin dependent kinase 4))
L1           10 MYOD (4A) (CDK4 OR (CYCLIN DEPENDENT KINASE 4))

=> s l1 (10A) (bind or binding or bound)
L2            8 L1 (10A) (BIND OR BINDING OR BOUND)

=> duplicate
ENTER REMOVE, IDENTIFY, ONLY, OR (?):remove
ENTER L# LIST OR (END):l2
DUPLICATE PREFERENCE IS 'MEDLINE, EMBASE, BIOSIS, CAPLUS'
KEEP DUPLICATES FROM MORE THAN ONE FILE?  Y/(N):n
PROCESSING COMPLETED FOR L2
L3            2 DUPLICATE REMOVE L2 (6 DUPLICATES REMOVED)

=> d l3 1-2 bib ab

L3   ANSWER 1 OF 2     MEDLINE on STN                    DUPLICATE 1
AN   2000069328     MEDLINE
DN   PubMed ID: 10601020
TI   Direct inhibition of G(1) cdk kinase activity by MyoD promotes
myoblast
     cell cycle withdrawal and terminal differentiation.
AU   Zhang J M; Zhao X; Wei Q; Paterson B M
CS   Laboratory of Biochemistry, NCI, National Institutes of Health,
Building
     37 Room 4A21, 9000 Rockville Pike, Bethesda, MD 20892, USA.
SO   EMBO journal, (1999 Dec 15) 18 (24) 6983-93.
     Journal code: 8208664. ISSN: 0261-4189.
CY   ENGLAND: United Kingdom
DT   Journal; Article; (JOURNAL ARTICLE)
LA   English
```

FS Priority Journals
EM 200001
ED Entered STN: 20000204
Last Updated on STN: 20000204
Entered Medline: 20000127
AB MyoD has been proposed to facilitate terminal myoblast differentiation by
binding to and inhibiting phosphorylation of the retinoblastoma protein
(pRb). Here we show that MyoD can interact with cyclin-dependent kinase 4
(cdk4) through a conserved 15 amino acid (aa) domain in the C-terminus of
MyoD. MyoD, its C-terminus lacking the basic helix-loop-helix (bHLH)
domain, or the 15 aa cdk4-binding domain all inhibit the cdk4-dependent
phosphorylation of pRb in vitro. Cellular expression of full-length MyoD
or fusion proteins containing either the C-terminus or just the 15 aa
cdk4-binding domain of **MyoD** inhibit cell
growth and pRb phosphorylation in vivo. The minimal **cdk4-binding** domain of **MyoD** fused to GFP can also induce
differentiation of C2C12 muscle cells in growth medium. The defective
myogenic phenotype in MyoD-negative BC3H1 cells can be rescued completely
only when **MyoD** contains the **cdk4-binding**
domain. We propose that a regulatory checkpoint in the terminal cell
cycle arrest of the myoblast during differentiation involves the
modulation of the cyclin D cdk-dependent phosphorylation of pRb through
the opposing effects of cyclin D1 and MyoD.

L3 ANSWER 2 OF 2 MEDLINE on STN DUPLICATE 2
AN 1999146910 MEDLINE
DN PubMed ID: 10022835
TI Coupling of the cell cycle and myogenesis through the cyclin D1-dependent
interaction of MyoD with cdk4.
AU Zhang J M; Wei Q; Zhao X; Paterson B M
CS Laboratory of Biochemistry, NCI, National Institutes of Health, Building
37 Room 4A21, 9000 Rockville Pike, Bethesda, MD 20892, USA.
SO EMBO journal, (1999 Feb 15) 18 (4) 926-33.
Journal code: 8208664. ISSN: 0261-4189.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals

EM 199904
ED Entered STN: 19990511
Last Updated on STN: 20020212
Entered Medline: 19990426
AB Proliferating myoblasts express the muscle determination factor, MyoD, throughout the cell cycle in the absence of differentiation. Here we show that a mitogen-sensitive mechanism, involving the direct interaction between MyoD and cdk4, restricts myoblast differentiation to cells that have entered into the G0 phase of the cell cycle under mitogen withdrawal. Interaction between **MyoD** and **cdk4** disrupts **MyoD** DNA-**binding**, muscle-specific gene activation and myogenic conversion of 10T1/2 cells independently of cyclin D1 and the CAK activation of cdk4. Forced induction of cyclin D1 in myotubes results in the cytoplasmic to nuclear translocation of cdk4. The specific MyoD-cdk4 interaction in dividing myoblasts, coupled with the cyclin D1-dependent nuclear targeting of cdk4, suggests a mitogen-sensitive mechanism whereby cyclin D1 can regulate MyoD function and the onset of myogenesis by controlling the cellular location of cdk4 rather than the phosphorylation status of MyoD.

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	4	myoD near3 (human or sapien)	USPAT	OR	OFF	2005/09/24 01:19
L2	81	(cdk4 or (cyclin adj dependent adj kinase adj "4")) near4 (bind or binding or bound)	USPAT	OR	OFF	2005/09/24 01:19
L3	0	L1 near10 L2	USPAT	OR	OFF	2005/09/24 01:20